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RETHINKING INTERNATIONAL RESPONSIBILITY FOR CYBERATTACKS IN OUTER SPACE

Abstract

Cyberattacks on space infrastructure can result in widespread chaos, humanitarian crises, and severe damage to terrestrial and space-based systems. Determining whether these significant impacts are internationally wrongful acts and whether they can be regarded as use of force or armed attack under international law is a complex challenge, requiring a multidisciplinary approach that blends international space law, international cyber law, public international law, and customary norms. The ambiguity around defining space cyber wrongs, the anonymity of attackers, and the overlap of various legal regimes make this determination even more difficult. These challenges highlight the urgent need to address legal responsibilities for space cyberattacks. The unique legal and technical complexities of these attacks' complicate matters further. Current legal frameworks governing space activities, cyber operations, and state responsibility were not designed to handle the intricate nature of space cyberattacks. This gap underscores the need to rethink and redefine international responsibility to address these evolving threats better. Therefore, this research explores internationally wrongful acts in the context of space cyberattacks, evaluating their potential classification and the difficulties in applying existing legal principles. By analyzing recent instances of space cyberattacks, this research illustrates the practical challenges in attribution and applying legal principles. This research advocates for significant enhancements to the existing international responsibility regime for space cyberattacks. A crucial step is clarifying state responsibilities by specifying obligations for preventing and responding to cyber threats, including those from non-state actors. To achieve this, addressing legal ambiguities by defining what constitutes space cyber wrongdoing and clarifying legal obligations is essential for enhancing regulatory clarity. Equally important is strengthening the existing legal regime and establishing novel mechanisms for attributing space cyberattacks, facilitating more precise accountability. On the domestic front, it is critical to integrate the principle of peaceful purposes into space laws, standardize national regulations to align with international norms and elevate technological standards. Internationally, a concerted focus on space cyberattacks, bolstered by soft law instruments and robust international cooperation, is vital for effective prevention and response.